## Remarks

This Amendment is responsive to the Final Office Action dated January 13, 2006. Reexamination and reconsideration of claims 1-11, 29-30 and 34 is respectfully requested.

## Claim Rejections

Claim 1 was rejected under 35 U.S.C. §112, first paragraph, since the application allegedly failed to provide any adequate written description concerning a purportedly newly added limitation. However, the purportedly newly added limitation appeared in original claims 29 and 34. This limitation was copied to claim 1.

Claims 1, 2, and 4-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama et al. (US 6771378) (Akiyama), and Kurachi (US 6181436) (Kurachi), and further in view of Nakagiri et al. (US 6965440) (Nakagiri). The combination of references does not teach (1) displaying a visual representation of the print job without the affected toner color, or (2) suggesting alternate color schemes.

Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama, Kurachi, Nakagiri, and Yabe (US 5907415) (Yabe). The combination of four references does not teach (1) displaying a visual representation of the print job without the affected toner color, (2) suggesting alternate color schemes, or (3) accessing a color lookup table and re-mapping a color gamut based on the lookup table. Even though four references are combined using hindsight reconstruction, the Office Action still has to take "Official Notice" of facts to reject claim 3.

Claims 29, 30, and 34 were rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama in view of Munetomo (US 6661530). The combination of references does not teach (1) permitting the print job to print with the non-optimal condition, (2) permitting a print job to print without a toner color affected by a non-optimal condition, or (3) visually presenting a print job in selectable alternate color schemes.

## Claim 1 Is Not Indefinite And Includes No New Matter

**35 U.S.C. §112**

Claim 1 was rejected under 35 U.S.C. §112 first paragraph. The Office Action asserts that the amendments made to claim 1 added new matter that was not supported. Specifically the Office Action asserts that the application did "not suggest displaying a visual representation of the print job with the user selected color scheme." This assertion is simply wrong. The Examiner is directed to original claim 29 which claimed a computer having a print controller that was configured to provide options for managing a non-optimal condition. The options included "visually presenting the print job in one or more selectable alternate color schemes." Similarly, the Examiner is directed to original claim 34 which claimed a computer configured to "display the print job with the one or more alternate color schemes."

Clearly the application originally described and claimed print previewing a print job with different user selectable color schemes. Therefore, the 35 U.S.C. §112 rejection should be removed.

## The Claims Patentably Distinguish Over the References

**35 U.S.C. §103**

To establish a prima facie case of 35 U.S.C. §103 obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. MPEP 2143.01 Second, there must be a reasonable expectation of success. MPEP 2143.02 Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.03 Additionally, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). This requirement is intended to prevent unacceptable "hindsight reconstruction" where Applicant's invention is recreated from references using the Application as a blueprint.

Here, the third criteria described in MPEP 2143.03 is not satisfied since the combination of references does not teach or suggest all the claim limitations. None of the references, alone and/or in combination, teach (1) displaying a visual representation of the print job without the affected toner color or (2) suggesting alternate color schemes. Thus, none of the claims are obvious for at least this reason. Additionally, none of the references, alone and/or in combination teach visually presenting a print job in selectable alternate color schemes that exclude the toner color affected by the non-optimal condition.

Independent Claim 1

Claim 1 is directed to a method that includes displaying a visual representation of a print job without an effected toner color and suggesting alternate color schemes to use for the print job. While the references generally describe print previewing and may even print preview with a "toner save" condition, none of the references teach print previewing a print job as it would appear as compromised by a non-optimal condition (e.g. low ink color). Additionally, while the references may allow a user to select an ink to use to replace a missing ink, none of the references teach suggesting alternate colors schemes based on reproducible colors in a color gamut.

Claim 1 was rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama and Kurachi further in view of Nakagiri. The Office Action asserts that Akiyama teaches suggesting one or more alternate color schemes. The Office Action points to Akiyama figures 21-24 to support these assertions. These figures represent simulated screen shots that are provided to a user when a printer reports that it is out of one color of ink. The screens provide a user an opportunity to select a different color ink to use in place of the depleted ink. The screens do not suggest an alternate color scheme, they merely provide the user an opportunity to specify one single ink to replace one single missing ink.

Close examination of these screens reveal that only a standard set of inks (e.g., cyan, yellow, magenta) are presented to a user. The standard set may be presented even if one of the standard colors is missing. Therefore, a printer may report that cyan is missing and then give the user the option of selecting cyan. This would cause the printer to again report that cyan is missing and require the user to choose again. This is not the same as "suggesting one or more alternate color schemes." A color scheme is more than just a replacement ink.

A color scheme is related to a color gamut. As described in the application, a color gamut refers to "the range of colors that is reproducible by a print device." Page 4, lines 7-8. The relation is made on page 5, lines 8-14:

> The color gamut available for printing the job is adjusted according to the alternate color scheme by mapping the print job to a look-up table that replaces non-reproducible colors with reproducible colors. Adjusting the color gamut based on an alternate color scheme permits the print job to proceed without being canceled, avoids the unacceptable fading or streaking between colors that occurs when a toner color is low or empty, and forestalls the need to replace the missing toner color.

Thus, it is evident that a color scheme is more than just a single ink. Therefore, picking a different ink as described in Akiyama does not even approach "suggesting one or more alternate color schemes." For at least this reason this claim is not obvious.

Additionally, the Office Action asserts that Kurachi teaches displaying a visual representation of the print job without the affected toner color. The Office Action points to figure 5, to support this assertion. Kurachi figure 5 discloses presenting a "rough image" of a print file. This "rough image" is not an image that represents a print preview of what a compromised print job would look like. Instead, the "rough image" represents a minimally rendered image that helps a user determine which print file to print. The discussion associated with a "rough image" is silent with respect to color schemes. The "rough image" rendered by Kurachi would likely appear the same regardless of the printer associated with the print job and regardless of the printer condition (e.g., missing ink). Thus, even if combined, the references do not teach the claimed element. For this additional reason this claim is not obvious.

The Office Action also asserts that Nakagiri teaches that a visual representation of the print job can be displayed with a selected alternate color scheme. The Office Action points to figures 8 and 13 to support this assertion. Close examination of Nakagiri figure 8 reveals no suggestion of a color scheme. Similarly, close examination of Nakagiri figure 13 reveals no suggestion of a color scheme. To the extent that these figures are related to printing, they provide a user a standard set of choices concerning options like paper size, paper orientation, and black & white versus color. These figures and Nakagiri in general are silent concerning print previewing a print job with an alternate color scheme.

In summary, the combination of references may provide a print preview, but none of the references (1) show what a print job would look like due to a non-optimal condition (e.g., missing ink) or (2) suggest an alternate color scheme. Claim 1 is not obvious for at least these reasons.

Dependent Claim 2

Claim 2 depends from claim 1. Claim 1 has been shown to be not obvious. Thus, this claim is similarly not obvious. Additionally, claim 2 recites adjusting the color gamut of the print device according to the selected alternate color scheme. Since none of the references teach suggesting an alternate color scheme, it follows that none of the references teach adjusting the

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color gamut based on the missing alternate color scheme. For this additional reason this claim is not obvious.

Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama and Kurachi further in view of Nakagiri. The Office Action asserts that Akiyama discloses adjusting the color gamut because "obviously, prior to print a print job with an alternate color schemes, the print must adjusts the color gamut." Office Action, page 4 (errors in original). The Office Action asserts that figures 21-24 disclose the adjusting.

Figures 21-24 are simulated screen shots that allow a user to select a different ink to use when confronted with a situation that one ink is low or completely depleted. Choosing one different ink is one thing. Adjusting a color gamut is something else. A color gamut is described as "the range of colors that is reproducible by a print device." Page 4, lines 7-8. Information concerning this range of colors may be stored in a printing device or print driver associated with a printing device. Knowing the range of colors that may be produced is a first step in presenting a user with different possible color schemes. Simply substituting one ink for another produced no state change in a printer or driver. Thus, it is not surprising that Akiyama says nothing about adjusting a color gamut. While an input is received concerning a single replacement ink to use, this does not change state and/or awareness in a printer concerning the colors it knows it can reproduce. Thus, claim 2 is not obvious for this additional reason.


Claim 3

Claim 3 depends from claim 2. Claim 2 has been shown to be not obvious. Thus claim 3 is similarly not obvious. Additionally, claim 3 recites that the method includes accessing a color look-up table that corresponds to the non-optimal condition and mapping the color gamut of the print device to the color look-up table to replace non-reproducible colors in the print job with reproducible colors from the look-up table according to the selected alternate color scheme. Claim 3 is therefore not obvious for this additional reason.

The Office Action asserts that Yabe teaches a method for adjusting a color gamut. The Office Action points to figure 1, figure 3, and column 1, lines 24-30 as support for this assertion. The support is not present.

Yabe concerns adjusting colors associated with a scanned image. Yabe performs a color space compression process to convert RGB values produced by charge coupled devices (CCD) in

a scanner. The RGB values may vary depending on spectral characteristics of CCDs. The image processor in Yabe works with CYM and therefore the RGB values are converted to CYM values. This has nothing to do with changing a color gamut to account for a missing ink in a printer.

It follows that Yabe is silent with respect to accessing a color look-up table that corresponds to a non-optimal print condition. To the extent that Yabe involves a color look-up table, it concerns RGB to CYM conversion, not adjusting a gamut based on a missing ink condition.

Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama, Kurachi, Nakagiri, and Yabe (US 5907415) (Yabe). This is four references. Applicant will now comment on the propriety of combining four references in the manner performed in the Office Action. This appears to be hindsight reconstruction where the Office Action is using the Application as a blueprint to find parts of the claimed invention in unrelated references. Hindsight reconstruction has long been frowned upon:

> A rejection based on section 103 clearly must rest on a factual basis, and these facts must be interpreted without **hindsight reconstruction** of the invention from the prior art. In making this evaluation, all facts must be considered. The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or **hindsight reconstruction** to supply deficiencies in its factual basis. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968) (emphases in original).

> The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). MPEP 2143.01

The hindsight reconstruction engaged in by the Office Action is impermissible since nothing in the prior art or the references suggests the desirability of combining the four references. Additionally, even though the Examiner performed a keyword search and found four references that included most of the words from the rejected claims, these four references still do not teach every element as claimed. Thus, even though four references are combined, the Office Action still takes "Official Notice" of facts when rejecting claim 3. For these additional reasons claim 3 is not obvious and should be allowed.

Claim 4

Claim 4 depends from claim 1. Claim 1 has been shown to be not obvious. Thus claim 4 is similarly not obvious. Additionally, claim 4 recites that the method includes presenting print options including permitting a print job to print with the non-optimal condition, and permitting the print job to print without the affected toner color. None of the references teach these elements. Claim 4 is therefore not obvious for this additional reason.

The Office Action asserts that Akiyama discloses providing these print options. The Office Action points to figures 19 and 20 to support the assertion. While Akiyama provides a user with some print options, it does not disclose the claimed print options. Figures 19 and 20 represent simulated screen shots of popups presented when a printer runs out of ink. The screens report on the missing ink situation and provide three choices, (e.g., cancel, wait for repair, use different color ink). Claim 4 includes permitting the print job to print with the non-optimal condition and permitting the print job to print without the affected toner color. Neither of these options is available through the popups. The Office Action asserts that if the user chooses the Akiyama execute button without selecting a different ink that the print job will be printed with the compromised condition. This is inaccurate. The text associated with these figures makes it clear that the user will be returned to the popup until they choose a replacement ink, fix the printer, or cancel the print job. Thus, claim 4 is not obvious for this additional reason.


Independent Claim 29

Claim 29 concerns a computer coupled to a print device. The computer includes a printer controller that provides options for managing a non-optimal condition. The options include permitting the print job to print with the non-optimal condition and permitting the print job to print without a toner color affected by the non-optimal condition. Claim 29 also discloses visually presenting the print job in one or more selectable alternate color schemes that exclude the toner color affected by the non-optimal condition. Claim 29 was rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama in view of Munetomo.

While Akiyama discloses providing some options when confronted with a non-optimal condition in a printer, it does not provide the claimed options. Similarly, while Munetomo discloses a print preview, it does not provide the claimed print preview.

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The Office Action asserts that Akiyama teaches permitting the print job to print with the non-optimal condition or without a toner color affected by the non-optimal condition. The Office Action points to the execute button on figures 21-24. However, pressing this execute button would not lead to the claimed actions. Pressing this execute button would apply a user choice concerning a replacement ink. Akiyama provides paths for only three choices, canceling a print job, repairing the printer, and using a substitute ink. None of these three choices are the claimed choices. For at least this reason claim 29 is not obvious.

The Office Action also asserts that Munetomo teaches displaying a visual representation of the print job without the affected toner color. The Office Action points to figures 12 and 13 to support the assertion. These two figures show a print preview with a "toner saver" setting activated or not activated. In either case, the color will be the same, only the ink density will be changed. The Munetomo specification reads "Fig. 12 and 13 show examples of the preview screen display when the toner save mode is set and when the toner save mode is not set, respectively." Col. 15, lines 5-7. Thus, Figures 12 and 13 compare and contrast a printout preview produced with a toner save mode on (Figure 12) and off (Figure 13). This may affect black and white density, but does not affect color. Munetomo is silent concerning alternate colors. Thus, this claim is not obvious for this additional reason.

Claim 30

Claim 30 depends from claim 29. Claim 29 has been shown to be not obvious and thus claim 30 is similarly not obvious. Additionally, claim 30 recites that the printer controller can adjust the color gamut of a print device according to a selected alternate color scheme. For this additional reason this claim is not obvious.

Claim 30 was rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama and Munetomo. The Office Action asserts that Akiyama discloses adjusting the color gamut. The Office Action relies on figures 23 and 24 to support the assertion. Figures 23 and 24 are simulated screen shots that allow a user to select a different ink to use when confronted with a situation that one ink is low or completely depleted. Choosing one different ink is much less than adjusting a color gamut. A color gamut is described as "the range of colors that is reproducible by a print device." Page 4, lines 7-8. Simply substituting one ink for another produces no state change in a printer or driver that would reflect a color gamut adjustment.

Thus, it is not surprising that Akiyama says nothing about adjusting a color gamut. While an input is received concerning a single replacement ink to use, this does not change state and/or awareness in a printer concerning the colors it knows it can reproduce. Thus, claim 30 is not obvious for this additional reason.

Independent Claim 34

Claim 34 is directed to a system that includes a computer configured to visually display a print job based on the condition of a consumable component in an electrophotographic print device. The computer is also configured to look up alternate color schemes based on the condition of the consumable component and to display the print job with the one or more alternate color schemes.

Claim 34 was rejected under 35 U.S.C. §103(a) as being unpatentable over Akiyama in view of Munetomo. The Office Action asserts that Akiyama teaches looking up alternate color schemes. The Office Action points to figures 21-24 to support this assertion. While these figures illustrate giving a user the chance to select a different ink, to cancel a print job, or to fix a printer, they are silent concerning looking up alternate color schemes. A scheme is more than a single ink. Additionally, to the extent that a single ink would be considered a scheme, figures 21-24 do not teach looking up a color scheme based on a condition of a consumable. The popups illustrates in figures 21-24 likely present the same choices no matter what the condition of the printer. Thus, claim 34 is not obvious for at least this reason.

The Office Action also asserts that Munetomo teaches displaying a visual representation of the print job without the affected toner color. The Office Action relies on Figures 12-13 to support this assertion. However, these figures say nothing about color, alternate colors, missing colors, and so on. These figures illustrate two print previews. The first print preview shows a black and white preview with a toner save setting active. The second print preview shows the same black and white preview with the toner save setting not active. While two different print previews are illustrated, neither is associated with a non-optimal printer condition and neither is associated with color. For this additional reason this claim is not obvious.

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## Ascertaining Skill Level of One Skilled In The Art

The MPEP requires that the Office Action ascertain and describe the level of ordinary skill so that objectivity can be maintained. MPEP §2141.03 reads:

> The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry. *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718, 21 USPQ2d 1053, 1057 (Fed. Cir. 1991). The examiner must ascertain what would have been obvious to one of ordinary skill in the art at the time the invention was made, and not to the inventor, a judge, a layman, those skilled in remote arts, or to geniuses in the art at hand. *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

Here the Office Action neither ascertains nor reports on the level of ordinary skill in the art. Thus it is not surprising that objectivity appears to have been lost in the obviousness inquiry. In this Office Action, it is particularly important for the Examiner to have identified and reported on the skill level of one skilled in the art because the Examiner takes "Official Notice" of many items that the Examiner asserts are "obvious". Specifically, the Examiner has taken "Official Notice" of what would be obvious to one "skilled in the art" in rejecting claims 1, 2, 3, 4, 9, 10, 29, and 34. By not ascertaining and describing the skill level of one skilled in the art, the Office Action has compromised Applicant's ability to respond meaningfully to the numerous "Official Notices" taken in the Office Action.

MPEP §2144.03 speaks directly to "Official Notice". This section counsels that only "in limited circumstances is it appropriate for an examiner to take official notice of facts not in the record or to rely on 'common knowledge' in making a rejection." MPEP §2144.03 This section specifically warns that "such rejections should be judiciously applied." MPEP §2144.03 Applying "Official Notice" to reject 8 of 14 claims is not "judiciously applying" this technique. Furthermore, the Office Action persists in its Official Notice even though this rejection has been made Final. "Official Notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, **these circumstances should be rare when an application is under final rejection.**" MPEP §2144.03

## Withdrawal of Final Rejection

Applicant respectfully submits that the Final Rejection issued on the application is improper based on MPEP 706.07(a) and should be withdrawn. MPEP 706.07(a) states "Furthermore, a second or any subsequent action on the merits in any application or patent undergoing reexamination proceedings will not be made final if it includes a rejection, on newly cited art, …of any claim not amended by applicant or patent owner in spite of the fact that other claims may have been amended to require newly cited art."
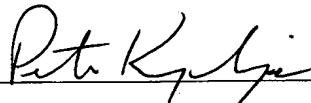
Originally claim 1 was rejected as being unpatentable over Akiyama and Munetomo. Now, claim 1 is rejected as being unpatentable over Akiyama, Kurachi, and Nakagiri. The previous amendments made to claim 1 were not made to distinguish over the references but only to assist the Examiner in understanding the claim. The amendments did not change the scope of the claim. Therefore, there is no basis to hold Applicant's amendment necessitated the new grounds of rejection and the Final Rejection is premature (MPEP 706.07(c)). Additionally, since the previous amendments made to claim 1 simply clarified and did not seek to distinguish over the references, the Final Rejection issued on claim 1 is improper based on MPEP 706.07(a) and should be withdrawn.

## Conclusion

For the reasons set forth above, claims 1-11, 29, 30, and 34 patentably and unobviously distinguish over the references and are allowable. An early allowance of all claims is earnestly solicited.

Respectfully submitted,

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